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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,919	04/13/2004	Bala Ramachandran	051933-1100	3560

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EXAMINER

NGUYEN, SIMON

ART UNIT

PAPER NUMBER

2618

DATE MAILED: 08/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/822,919

**Applicant(s)**

RAMACHANDRAN ET AL.

**Examiner**

SIMON D. NGUYEN

**Art Unit**

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 17-30 is/are rejected.
- 7) ☒ Claim(s) 13-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 21, 24, 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Tilley et al. (6,356,217).

Regarding claims 1, 21, 24, 26, Tilley discloses a DC offset correction (abstract), comprising: DC offset correction circuit having an adjustable bandwidth, and control logic for controlling the bandwidth of the DC offset correction circuitry (figs.1-3, column 2 lines 59 to column 6 line 46, column 5 lines 22 to column 6 line 24, column 6 line 47 to column 7 line 33, column 8 lines 17-31).

3. Claims 1, 21, 24, 26 are rejected under 35 U.S.C. 102(a) as being anticipated by Rahman et al. (6,560,447).

Regarding claims 1, 21, 24, 26, Rahman discloses a DC offset correction (abstract), comprising: DC offset correction circuit having an adjustable bandwidth, and control logic for controlling the bandwidth of the DC offset correction circuitry (figs.2-3, column 5 line 59 to column 6 line 4, column 7 line 6 to column 8 line 25).

4. Claims 1, 21, 24, 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Seendripu et al. (2005/0239428).

Regarding claims 1, 21, 24, 26, Seendripu discloses a DC offset correction (abstract), comprising: DC offset correction circuit having an adjustable bandwidth, and control logic for controlling the bandwidth of the DC offset correction circuitry (abstract, paragraphs 12, 29, 66, 76, 82, 107, 109, 115, 148, 152, and abstract).

5. Claims 1, 21, 24, 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Fague et al. (2004/0146122).

Regarding claims 1, 21, 24, 26, Fague discloses a DC offset correction (abstract), comprising: DC offset correction circuit having an adjustable bandwidth, and control logic for controlling the bandwidth of the DC offset correction circuitry (figs.1-3, paragraph 7).

6. Claims 1-3, 7-12, 21-26, 28-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Holenstein et al. (6,985,711).

Regarding claims 1, 21, 24, 26, Holenstein discloses a DC offset correction (abstract), comprising: DC offset correction circuit having an adjustable bandwidth, and control logic for controlling the bandwidth of the DC offset correction circuitry (figs.4-6, 8, 12-16, abstract, column 1 lines 53-64, column 5 lines 20-34, column 8 lines 59 to column 9 line 17, column 13 lines 33-64, column 15 lines 17-42, column 21 lines 37-52).

Regarding claims 2-3, Holenstein further discloses a switch network (multiplexer) and a low pass filter having a resistor network, a capacitor, and a high pass filter (column 10 line 1-25, column 12 lines 25-35, column 13 lines 33-64, column 17 lines 47-64, figs. 8, 13, 17a).

Regarding claims 7-8, 28-29, Holenstein further discloses the high pass filter including filter coefficients that are selected based on the signal from the controller to alter the bandwidth (figs. 6, 8, 13, column 9 lines 6-17, column 10 lines 38-45, 58-64, column 13 lines 47-64).

Regarding claims 9-10, Holenstein further discloses a serial bus interface (620 fig.6), a processor, a memory (column 6 lines 7-12, column 9 lines 45-47), and a receiver (fig.5).

Regarding claims 11-12, 22-23, 30, Holenstein further discloses a bandwidth change of the DC offset correction in response a change in mode of operation (column 6 lines 32-40). It should be noted that a mode command to change modes is inherently.

Regarding claim 25, Holenstein further discloses sending a first signal to increase the bandwidth to adjust the DC offset, when the DC offset has been corrected, send a second signal to decrease the bandwidth to the previous estimate (abstract).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4-6, 17-20, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holenstein et al. (6,985,711) in view of Chen et al. (2004/0012439).

Regarding claims 4-5, 17-20, 27, Holenstein discloses changing resistance to effect the bandwidth change (column 10 lines 1-25). Holenstein does not specifically disclose changing of capacitance effects the bandwidth change.

Chen discloses a DC offset correction (compensator 26) (abstract, fig. 4), wherein the compensator 26 comprising: a plurality of capacitors, a plurality of resistor, and filters, a switching network (transistors), wherein the capacitors and the resistors help changing the bandwidth of the signals in order to adjust the DC offset compensation (fig. 4, paragraphs 27). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have Holenstein, modified by Chen in order to maintain its output DC offset voltage at a desired level regardless a power of an input signal.

#### ***Allowable Subject Matter***

9. Claims 13-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 13-16, the prior art of record fails to teach or suggest the step of increasing a bandwidth during a sleep mode/ compressed mode of operation for effecting a change of the DC offset correction.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Nguyen whose telephone number is (571) 272-7894. The examiner can normally be reached on Monday-Friday from 7:00 AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban, can be reached on (571) 272-7899.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
600 Dulany, Alexandria, VA 22314


Or faxed to:

(571) 273-8300 (for formal communications intended for entry)

Hand-delivered response should be brought to Customer Service Window located at the Randolph Building, 401 Dulany, Alexandria, VA, 22314.

Simon Nguyen

July 31, 2006

  
**SIMON NGUYEN**  
**PRIMARY EXAMINER**